Fleet Aircrew Simulator Training (FAST)
Navy Aviation Simulation Master Plan (NASMP)

BRIEF TO:

Naval Aviation Training Strategic Advisory Group (NATSAG) XX

NAVAL AVIATION TECHNOLOGIES

CDR Rich Brasel, USN

Naval Air Systems Command, Aviation Training Systems (PMA205F1)

Briefing Outline

- **FAST / NASMP Background**
- **FAST / NASMP Progress and Plans**
- **NASMP IPT**

FAST

"Develop a FAST Plan that maximizes the utility of simulator effectiveness. Update trainer contribution to T&R matrices…."

- **Applies to Navy Aviation Training Systems**
- **Simulators are a cost effective and measurable way to improve fleet readiness**
- **Procure some new simulators and upgrade existing simulators**
- **Increase fidelity to enable unit level T&R events and credit**
- **Provide inherent interoperability**
- **Traceability with NMETLs/JMETLs**

NASMP

VISION: Seamless integration and modernization of all Navy aviation simulation assets in a tactically relevant environment. Meet the fleet's training requirements from Undergraduate to Post FRS in a cost effective manner.

- **Acquisition Philosophy applied to FAST Requirements**
- **Provide T+R Capable Training Systems for Fleet use**
- **Reduce simulator LCC and Cycle Time through a common architecture**

"Include Options for Expanding Simulation and For Achieving Composite Training and Joint Task Force Exercise Equivalencies…"

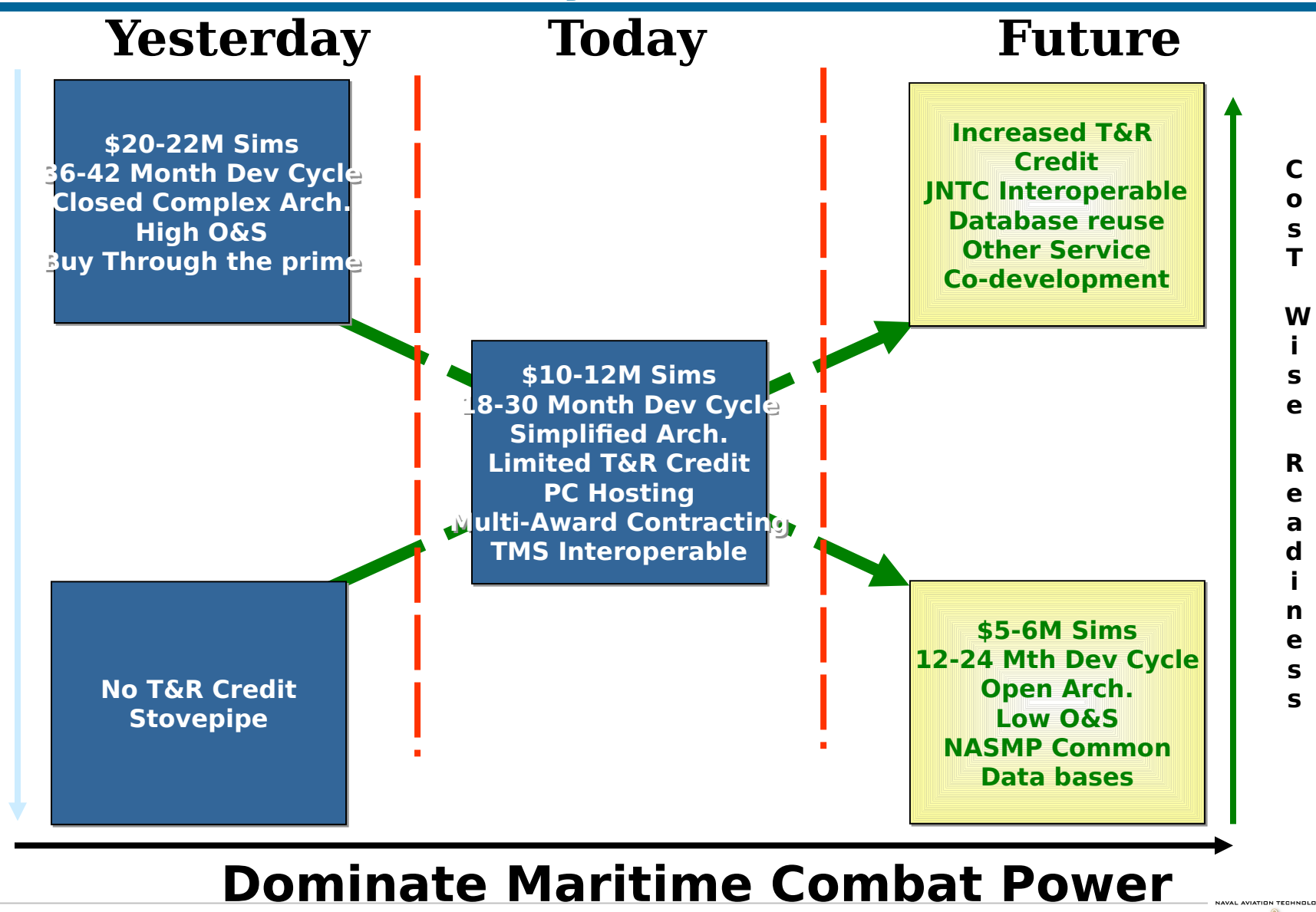
FAST / NASMP Goals

F/A-18C/E/F	**SH-60B**	**P-3C**
E-2C	**MH-60R/S**	**EP-3E**
EA-6B		**E-6B**

- **Procure / upgrade simulators that meet Post-FRS fleet T&R requirements**
  - Complete Y+Z Requirements as listed in the T+R Matrix
  - Support Aircrew Training during the IDRC
  - Inherently interoperable in JNTC architecture

- **Dramatically reduce simulator LCC and Cycle Time**
  - Common data bases
  - Common simulator environment / interoperable computer generated threat systems
  - PC hardware to reduce O+S costs
  - Reduced F/A-18C TOFT cost from >$10M to <$5M
  - Improved cycle time from 42 months to 18-24 months

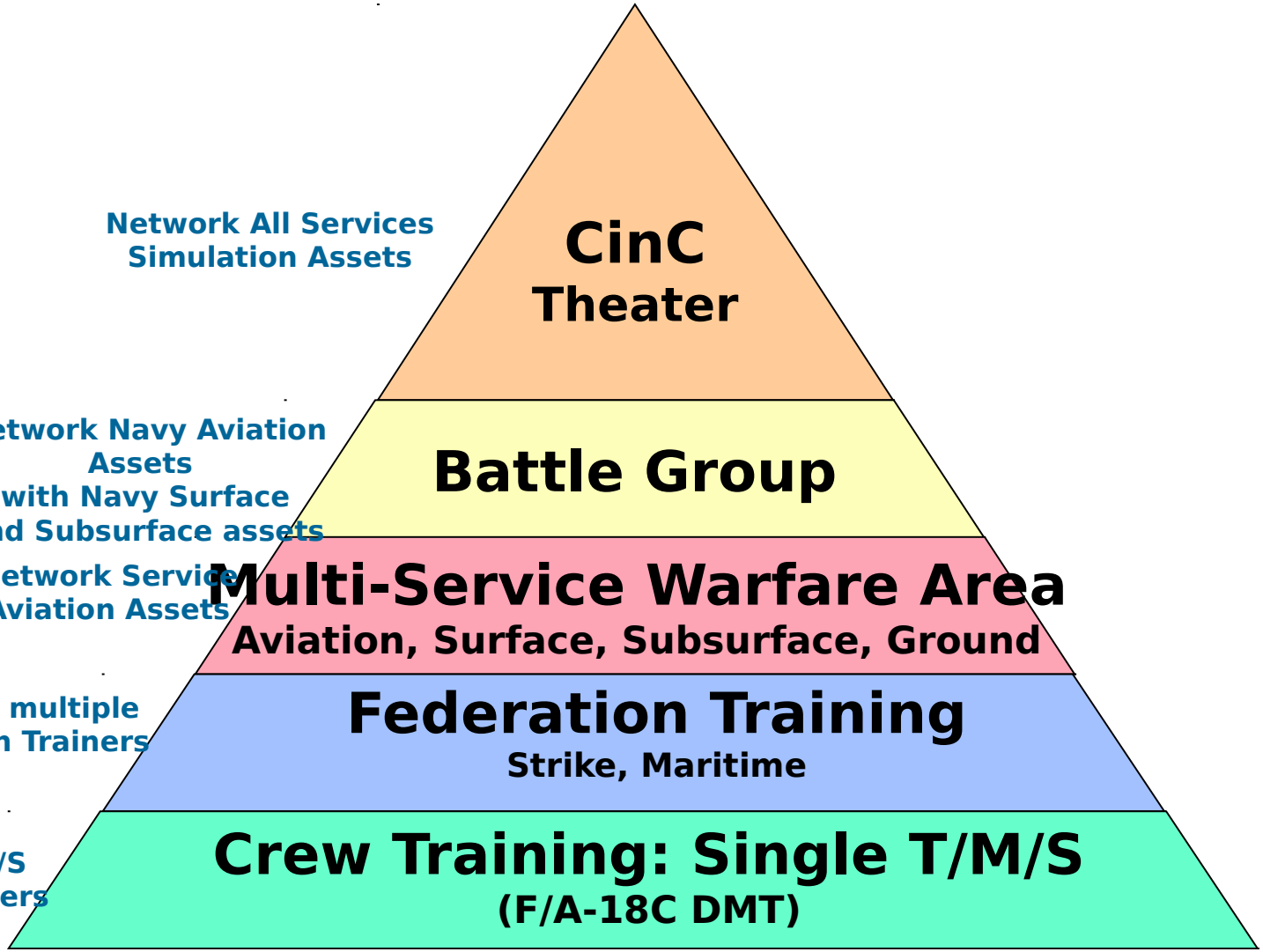
PMA205's Simulator Evolutionary Development



NASMP “Is” and “Is Not”

- **NASMP executes the FAST Budget Line**
  - Adds APN-7 funds to the existing Aircraft Platform Training Budget to enable T+R events
- **NASMP is the acquisition strategy for all platform specific procurements**
  - Decrease Life Cycle Cost (LCC) and contract cycle time
- **NASMP is the long range plan to ensure Fleet Aircrew Simulators are inherently interoperable**
  - Common software architecture and databases
- **NASMP is not a budget line**
- **NASMP is not a networking infrastructure (Now JNTC)**
- **NASMP is not a program, but a effort conceived to ensure “cost wise readiness” while meeting CNO interoperability goals**

NASMP
Interoperability Pyramid



FAST / NASMP in FY02 and FY03

- **Instructional Systems Design (ISD) Analysis Performed**
  - New CNAF T&R Identified Opportunities...FY02
  - Training System Functional Descriptions (TSFD) developed for F/A-18, E-2C, EA-6B, MH-60, EP-3E, E-6B, P-3C
- **Networking**
  - Front End Analysis (FEA) Of Training Tasks Indicates Team/Collective Training Has Significant Value
  - CNO Guidance For Achieving Composite Training and JTF Exercise Equivalencies
  - DoD Training Transformation Roadmap To Joint National Training Capability (JNTC)
- **Products**
  - F/A-18C DMT in Production
  - F/A-18E/F Block 2 Adopting NASMP Architecture

- **EP-3E MAST (NAS Fallon) connected to USAF DMOC**

- **First Iteration of Common Component Semi-Automated Forces (SAF) Next Generation Threat System (NGTS) under Cooperative Development Agreement with Air Force Research Lab (AFRL) and USAF Distributed Mission Operations Center (DMOC)**

- **E-2C Deployable Readiness Trainers used in Battle Force Tactical Training (BFTT) and Virtual Flag exercises . (CFFC funded)**

FAST / NASMP in FY04

- **Deliver F/A-18C DMT suite at NAS Oceana (RFT August 2004)**
- **Contracted for F/A-18C DMT suite at NAS Lemoore (RFT September 2005)**
- **NASMP Integration into NAS Lemoore F/A-18C DMT suite and back-fit into NAS Oceana suite on contract**
- **Common computer generated operating environments with USAF**
  - Next Generation Threat System (NGTS) delivery in Lemoore F/A-18C DMT
  - Weapon Server Common Environment (WSCE) Enhancement
- **NASMP Integration incorporated in MH-60S and P-3C Sims RFPs**
- **Maritime Federation Solution for P-3C, MH-60R/S and MMA determined**
- **Common Visual Source Data Effort with NAVSEA, USMC, USAF, USA**
- **Interoperability with JNTC** (CFFC funded)
  - E-2C DRT for Virtual Flag participation
  - Multi-Level Security
  - NAS Lemoore F/A-18E/F playing in Virtual Flag

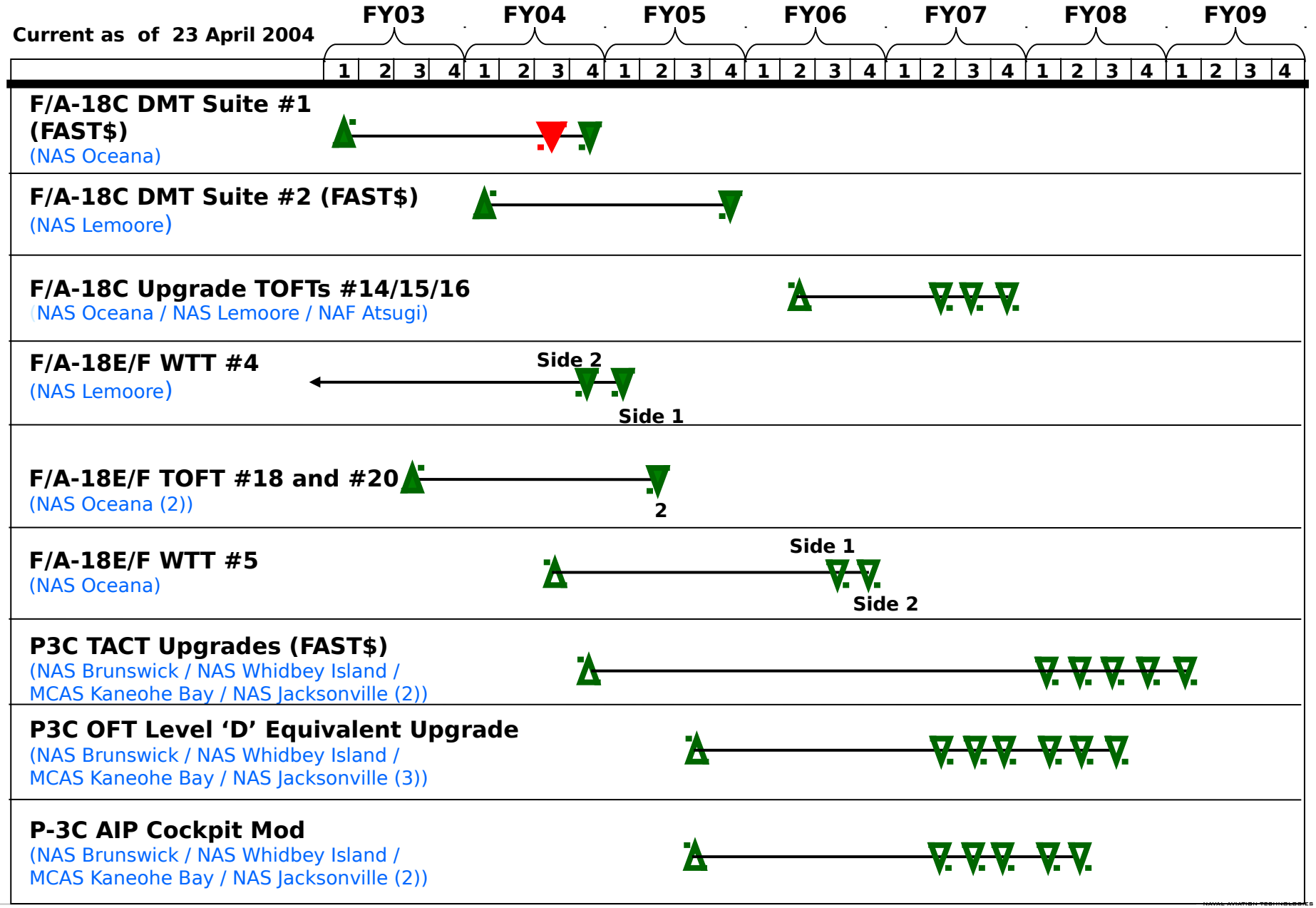
FAST / NASMP Plan For FY05

- **F/A-18C**
  - Deliver F/A-18C DMT Suite to NAS Lemoore (RFT September 2005)
  - Retrofit NASMP solution to F/A-18C DMT NAS Oceana
  - Demonstrate Wide Area Net connectivity (NAS Oceana to NAS Lemoore)
- **E-2C**
  - Update the E-2C 15F8H-5 (Hawkeye 2000 WST) to HLA compliance at PT. Mugu and NAS Norfolk. E-2C and F/A-18C DMT simulator interoperability (RFT FY06)
- **EA-6B**
  - Update the EA-6B 2F187 (ICAP III) trainer at NAS Whidbey Island to allow network interoperability. (RFT in FY06)
- **EP-3E**
  - Update the 10H1B Mission Avionics System Trainer (MAST) at NAS Whidbey Island / NSAWC to allow network interoperability. (RFT in FY06/07)
- **P-3C**
  - Update the P-3C 2F179 Tactical Aircrew Coordination Trainer (TACT) at NAS Brunswick / NAS Whidbey Island / MCAS Kaneohe Bay / NAS Jacksonville (2) to 2F179A Tactical Operational Readiness Trainer (TORT). (RFT in FY08/09)
- **DRT**
  - Continue production efforts on Deployable Readiness Trainers (DRT) for E-2C, F/A-18, and H-60 (Maritime Readiness Team Tactical Trainer - MRT3)

NAVAIR

"Z" SIMULATOR ROADMAP

Current as of 23 April 2004


FY03
FY04
FY05
FY06
FY07
FY08
FY09
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
F/A-18C DMT Suite #1 (FAST$)
(NAS Oceana)
F/A-18C DMT Suite #2 (FAST$)
(NAS Lemoore)
F/A-18C Upgrade TOFTs #14/15/16
(NAS Oceana / NAS Lemoore / NAF Atsugi)
F/A-18E/F WTT #4
(NAS Lemoore)
Side 2
Side 1
F/A-18E/F TOFT #18 and #20
(NAS Oceana (2))
2
F/A-18E/F WTT #5
(NAS Oceana)
Side 1
Side 2
P3C TACT Upgrades (FAST$)
(NAS Brunswick / NAS Whidbey Island / MCAS Kaneohe Bay / NAS Jacksonville (2))
P3C OFT Level 'D' Equivalent Upgrade
(NAS Brunswick / NAS Whidbey Island / MCAS Kaneohe Bay / NAS Jacksonville (3))
P-3C AIP Cockpit Mod
(NAS Brunswick / NAS Whidbey Island / MCAS Kaneohe Bay / NAS Jacksonville (2))
Contract Award
Original RFT
RFT
Est. Contract Award
Est. RFT

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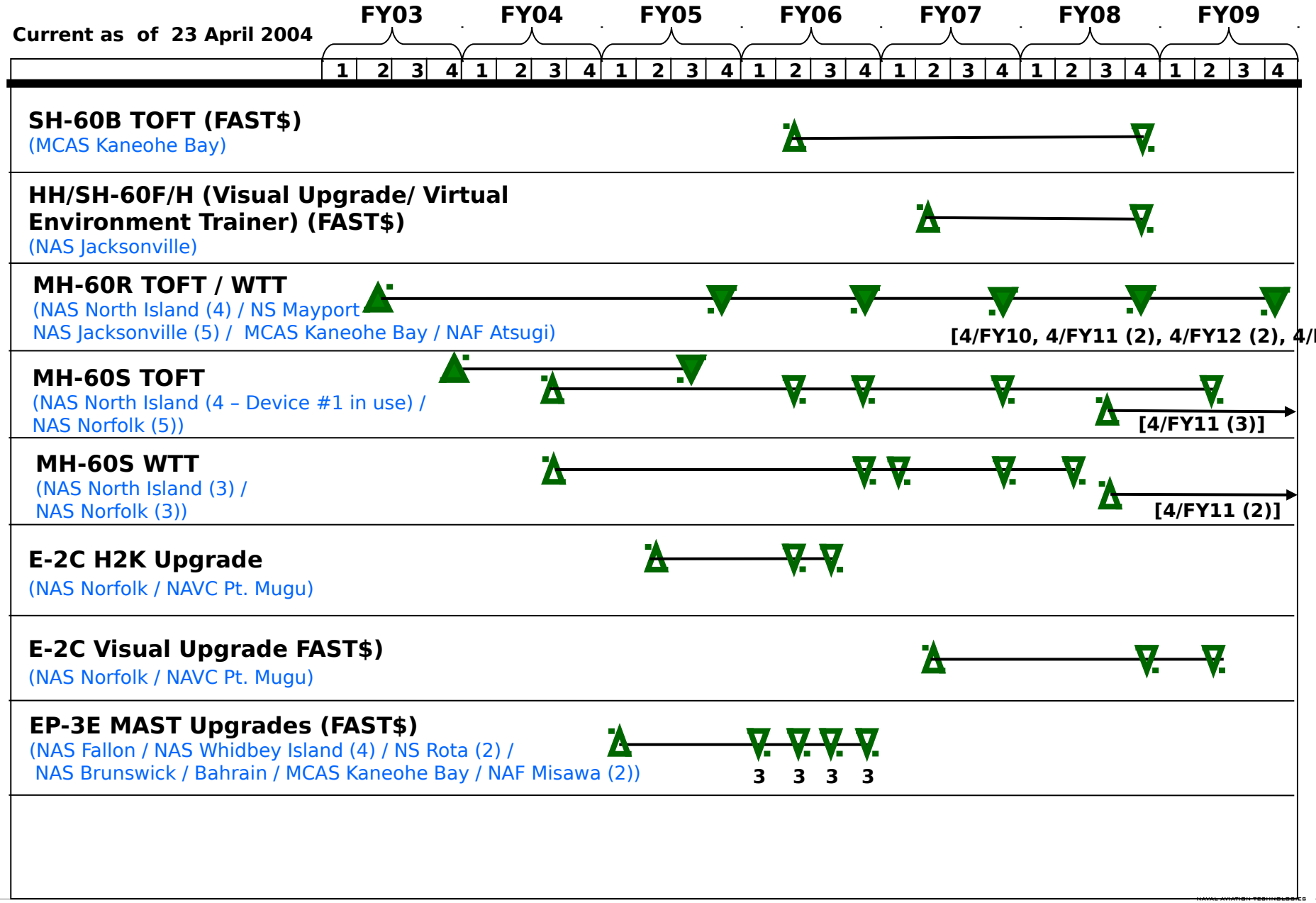
NAVAIR

"Z" SIMULATOR ROADMAP

Current as of 23 April 2004


FY03
FY04
FY05
FY06
FY07
FY08
FY09
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
SH-60B TOFT (FAST$)
(MCAS Kaneohe Bay)
HH/SH-60F/H (Visual Upgrade/ Virtual Environment Trainer) (FAST$)
(NAS Jacksonville)
MH-60R TOFT / WTT
(NAS North Island (4) / NS Mayport
NAS Jacksonville (5) / MCAS Kaneohe Bay / NAF Atsugi)
[4/FY10, 4/FY11 (2), 4/FY12 (2), 4/F
MH-60S TOFT
(NAS North Island (4 – Device #1 in use) /
NAS Norfolk (5))
[4/FY11 (3)]
MH-60S WTT
(NAS North Island (3) /
NAS Norfolk (3))
[4/FY11 (2)]
E-2C H2K Upgrade
(NAS Norfolk / NAVC Pt. Mugu)
E-2C Visual Upgrade FAST$)
(NAS Norfolk / NAVC Pt. Mugu)
EP-3E MAST Upgrades (FAST$)
(NAS Fallon / NAS Whidbey Island (4) / NS Rota (2) /
NAS Brunswick / Bahrain / MCAS Kaneohe Bay / NAF Misawa (2))
3 3 3 3

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Contract Award | Original RFT | RFT | Est. Contract Award | Est. RFT

NASMP IPT Charter

- **Define the *capability* desired from a *family* of *networked* simulators to facilitate naval aviation *training and readiness* in support of unit level, battle force and joint operations.**

- **Adjust current NASMP to account for overarching guidance to include *Training Transformation* and the *Fleet Response Plan*.**

NASMP IPT

- **Objectives**
  - Obtain fleet input to define NASMP requirements
    - **Better link between FPT, training & readiness**
  - Fleet support for future requirements and priorities
- **Deliverables**
  - CNAF CONOPS/policy for use of simulation to support T&R and other training requirements
    - **Establish funding priorities to best support of ACTC and CVW training across communities.**
  - Aviation input to Task Force SIM efforts (CFFC lead)
    - **Provide desired aviation capabilities from fleet wide training system**
  - Develop JCIDS documentation to support acquisition process

NASMP IPT

- **Requirements Lead – CDR Maribeth ‘Smitty’ Smith, CNAF**
  - Co-chair – Mr. Phil Grandfield, CNAF N80A
- **Readiness – CDR Ted Kaehler, CNAF N40T**
- **Resource Sponsor – Lt Dave Messman, N782B6**
- **Acquisition – CDR Rich Brasel / Mr. Brian Hicks, PMA205FI**
- **Training**

F/A-18 - CDR Kind / CDR Powell
SH60B/S – LCDR Mantz
E-2C - LCDR Marusich
P-3C/EP-3E – LT Sheehy
JSF - Captain Beach / Mr. Elk
EA-6B - CDR Troyer / LCDR Ward
SH60F/R – LT Marshall / LT Vaughn / LT Dewindt
NSAWC - Captain Dixon
E-6B – TDB

- **Simulator Fleet Project Teams**
  - F/A-18 - CDR Kind
  - Others???

NASMP/FAST Summary

- **Increased "Cost Wise" Readiness for the Fleet**
  - 1st FAST Sims in FY04 (F/A-18C DMT in NAS Oceana) will provide improved T&R capability through simulators
- **Decreased Future Simulator Cost and Acquisition Time**
  - 1st Fully NASMP compliant trainers in FY05 (F/A-18C DMT in NAS Lemoore)
- **Interoperability for Improved T&R Capabilities and Future Composite and Joint Training Capability**
  - F/A-18E/F and E-2C in future Virtual Flag exercises
- **Fleet Participation Crucial**
  - Requirements Identification
  - NASMP IPT

BACK UP and JIC

NASMP - F/A-18C DMT Integration Schedule

- NASMP Contract Award: 3 March 2004
- Post Contract Award Meeting: 5 April 2004
- System Requirements Review: 27-28 April 2004
- Preliminary Design Review: 22 July 2004
  - F/A-18C DMT NAS Oceana RFT 18 August 2004
- Critical Design Review: 1 December 2004
  - F/A-18C DMT NAS Lemoore RFT 4 December 2004
    (L-3 Com Arlington, TX)
- NASMP Integration (NAS Lemoore) 5 December 2004
- Training Readiness Review: 7 May 2005
  - NASMP Integration (NAS Oceana) 1 September 2005
- Ready For Training (NASMP):

NASMP Description

Program Manager/Office: Captain R.L. Howard/PMA205
Resource Sponsor: N782B6 Start Date: 10/1/02

Description:
Manage the Fleet Aircrew Simulation Training (FAST) Initiative to maximize reusability of simulation resources across Naval Aviation, Surface, Sub-surface and DoD Simulation User Communities while satisfying the core requirements of the FAST Initiative (Post-FRS IDRC Readiness)

Key Performance Parameters

N/A

Acquisition Objectives
Core Suite of TM&S products to support all Naval Aviation Training Device Requirements, that will be interoperable, tactically relevant training devices to enable T+R events.

Contractor Data
- Four cockpit F/A-18C DMT Suite #1for NAS Oceana, awarded on 4 Dec 2002 to EER, L3Com Team. RFT Planned for 30 June 2004. Revised to 18 Aug 2004
- Four cockpit F/A-18C DMT Suite #2 for NAS Lemoore, awarded on 3 Dec 2003 to EER, L3Com Team. Delivery 04 Dec 2004 in plant Arlington, TX
- NASMP Integration Contract awarded 03 March 2004. Delivery of Suite #2 with NASMP Components September 2005. Retrofit to Suite #1 September 2005

Milestones / Contract Events	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10
Milestones		F/A-18C DMT RFT Oceana	F/A-18C DMT RFT Lemoore (NASMP)	F/A-18C DMT RFT Oceana (NASMP); Strike Fed	Maritime Fed			
Contract Events	F/A-18C DMT CA	F/A-18C OPTION; NASMP Integration CA	P-3C / EP-3 / EA-6B / DRT CA	P-3C / E-2 / H-60 / F/A-18C / DRT CA	P-3C / H-60 / E-2 / DRT CA	H-60 / DRT / F/A-18EF / USMC CA	H-60 / USMC CA	
Funding (M)								
O&MN (COMS)	0	0	0.6	1.4	4.0	5.3	5.7	0
RDT&E	0	0	0	0	0	0	0	0
APN-6	0	0	0	0	0	0	0	0
APN-7*	$59.4	$31.0	$64.7	$96.0	$55.9	$58.4	$59.0	0

Platform Unique Events | Common Component Events | NASMP Events | F/A-18C DMT Events

*PR05 FAST Budget Plan dated 17 June 03, updated 23 Feb 04

PR05 FAST Budget Plan*

	Description	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Total
FA-18C	4 networked (Div Capable) sims Oceana	41.9							**41.9**
FA-18C	4 netted sims Lemoore - $40-60M		17.3						**17.3**
	Database, servers	4.0	4.0	4.0					**12.0**
	Networking, Models	13.5	7.7	5.0					**26.2**
EP-3E	MAST Imp.			3.9					**3.9**
P-3C	TACT upgrades (Bruns, Whidbey, Kbay, 2 Jax)			25.9	9.4				**35.3**
P-3C	8 OBTs (3M 1st article)			0.0	12.0	3.0			**15.0**
P-3C	Networking			0.0	1.3				**1.3**
E-2C	Networking to strike package - Norfolk/Pt Mugu			0.0	1.6				**1.6**
EA-6B	TOFT for Whidbey								**0.0**
EA-6B	Networking to strike package - Whidbey Island			1.0	0.0				**1.0**
SH-60B/R	TOFT K Bay				20.0				**20.0**
FA-18C	Upg TOFTs to 9 pnl vis (Lem, Oceana, Atsugi)			6.0	3.0				**9.0**
FA-18C	Networking - Atsugi				1.4				**1.4**
FA-18F/E	Networking - Atsugi				0.9				**0.9**
H/MH-60R/	Networking - Atsugi							0.5	**0.5**
IH/SH-60H/	1 VisUpgr/FLIR/HELLFIRE Upg/1 Virtual Env. Tmr				16.9	0.0			**16.9**
SH-60F/H	Networking to strike package - NORIS/JAX				2.1	0.0			**2.1**
SH-60B/F/F	db improvements, environmentals, ocean model				14.0	0.0			**14.0**
SH-60B	Networking NORIS/Mayport				0.0	2.1			**2.1**
E-2C	OFT visual 1 & 2 replacement, WST rehost				0.0	10.4			**10.4**
MH-60S	AMCM/CSAR upgrade to visuals/dbase 3 TOFTs					8.0			**8.0**
MH-60S	Networking						1.9		**1.9**
Micro Sims	Deployable Readiness Simulation		2.0	3.3	4.5	5.0	6.0	7.0	**27.8**
F/A-18E/F	F/A-18E/F WTT integration, 2 TOFTs, 2 Debrief Stations					9.5	14.0	6.0	**29.5**
	Synthetic ASW environment					7.0			**7.0**
F/A-18C	Integrate USN/USMC F-18Cs				7.5	6.9			**14.4**
	USMC sim data base upgrade, integration						15.7	12.5	**28.2**
All	Technology Upgrade and Refresh						15.5	27.3	**42.8**
All	Acquisition support and life -cycle support			0.6	1.4	4.0	5.3	5.7	**17.0**
	PR05 FMB Budget Totals	**59.4**	**31.0**	**49.7**	**96.0**	**55.9**	**58.4**	**59.0**	**409.4**

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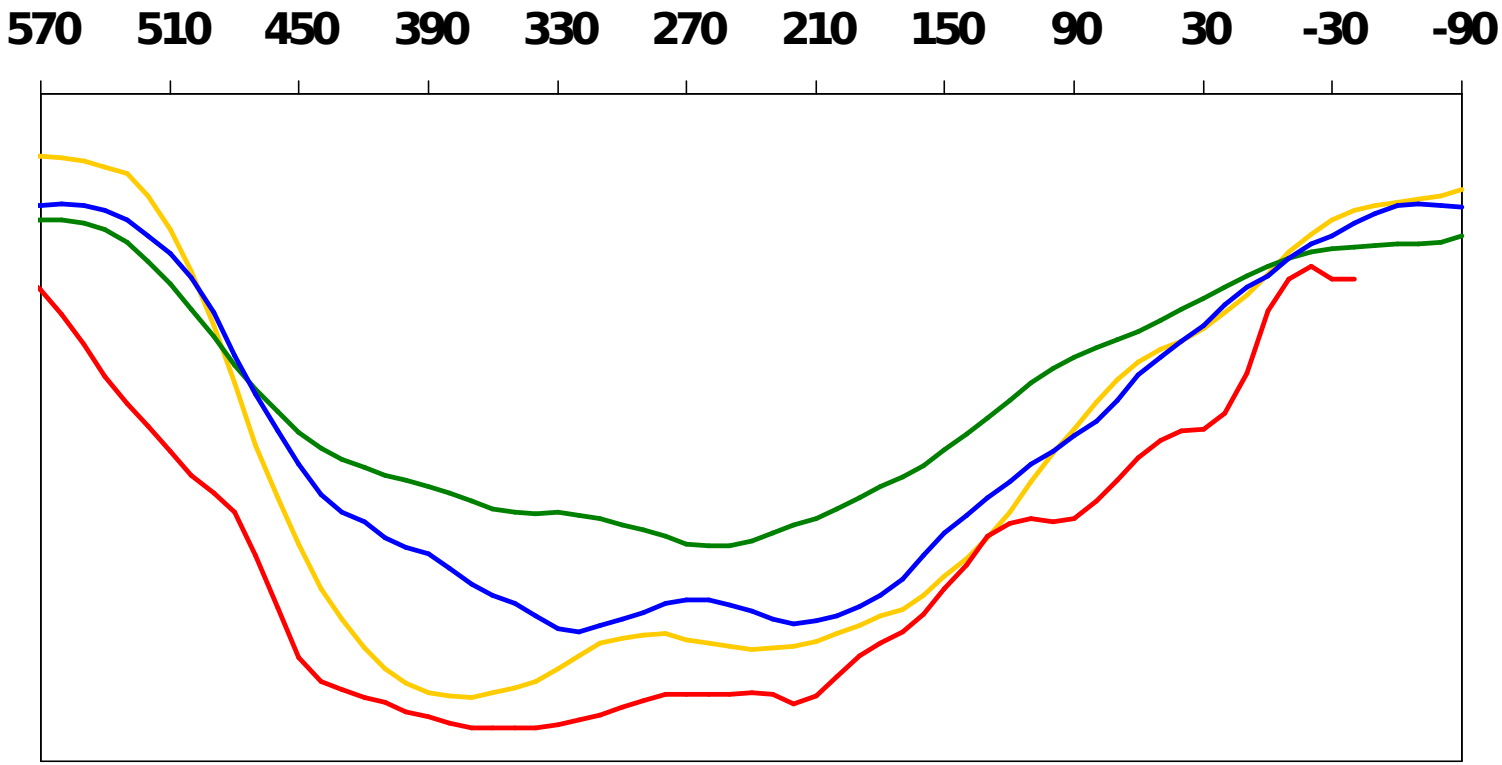
* PR05 FAST Budget Plan dated 17 June 03, updated 23 Feb 04

FAST History
CVW IDTC Trends

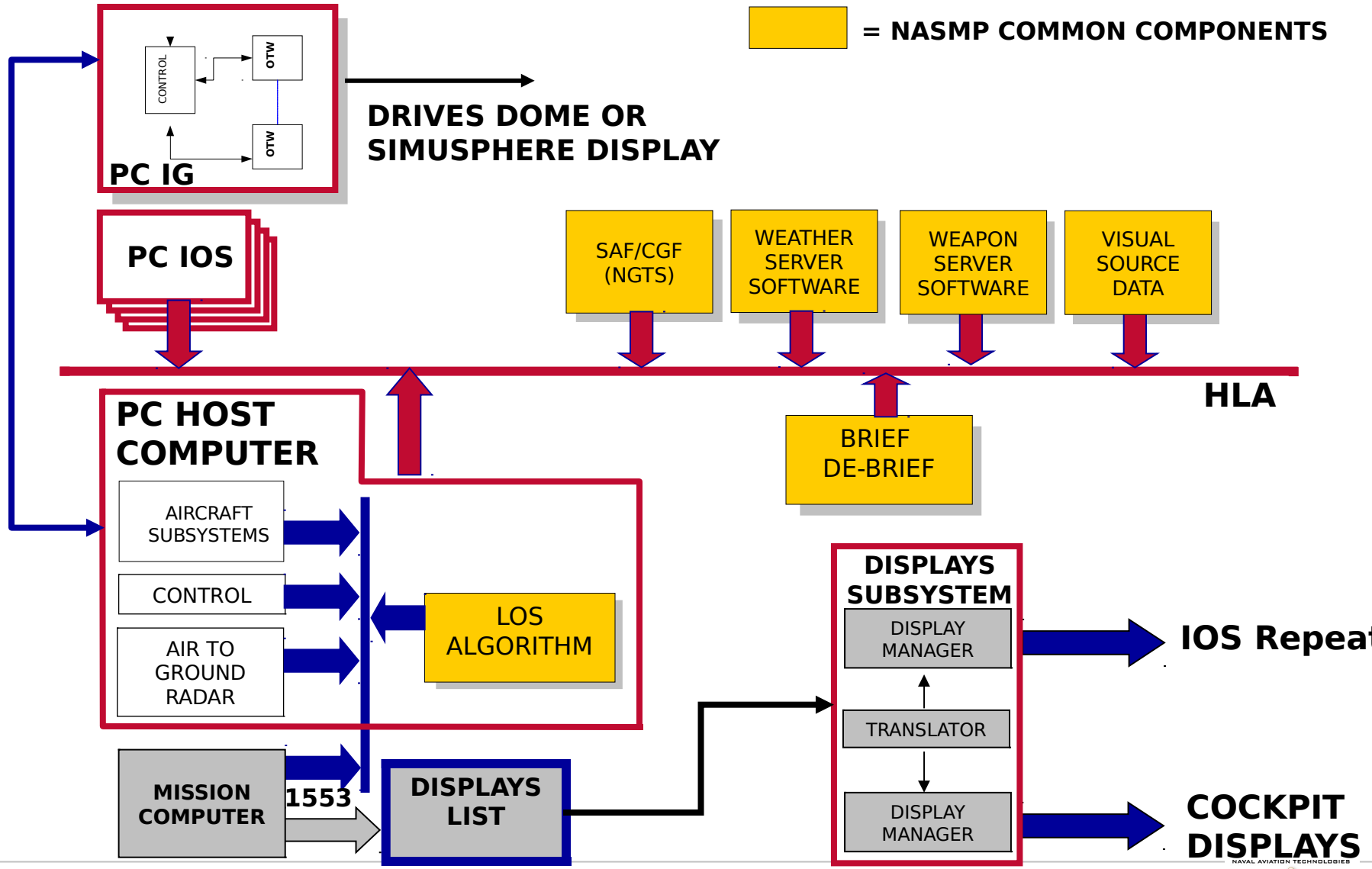
Non-Deployed Air Wing Readiness

Days Prior to Deployment



CNA 3/99, Junor et al

Modular Architecture with Common Components



FAST Progress

- **Instructional Systems Design (ISD) Analysis Performed**
  - New CNAF T&R Identified Opportunities...FY02
  - CNO Personally Jump-Starts Program...FY02/03
- **Networking**
  - Front End Analysis (FEA) Of Training Tasks Indicates Team/Collective Training Has Significant Value
  - CNO Guidance For Achieving Composite Training and JTF Exercise Equivalencies
  - DoD Training Transformation Roadmap To Joint National Training Capability (JNTC)
- **Products**
  - F/A-18C DMT in Production
  - F/A-18E/F Block 2 Adopting NASMP Architecture
  - MH-60R/S Moving to Common Open Architecture
  - P-3 Fidelity Upgrades Coordinated with H-60s
  - Multi-mission Maritime Aircraft (MMA) – Full ISD Across the Training Continuum

FAST TODAY

- Build Sims to Support Readiness Training
  - F/A-18C DMT Suites
  - PC Based Visual System
  - Common Threat Environments (NGTS)
  - Common Databases (Visual, Weapons)
- Network Appropriate Fidelity Sims
  - Strike Package
  - Maritime Package
  - BFTT, USAF DMOC
  - JNTC
- Filling IDRC Bathtub With Unit Level Readiness

NASMP Implementation

- **Building Appropriate Level of Fidelity Simulators**
  - **F/A-18C DMT Suites (NAS Oceana and NAS Lemoore)**
  - **PC Based Visual System**
  - **Common Components**

- **Network Simulators**
  - **Strike Federation**
  - **Maritime Federation**
  - **Battle Force Tactical Training (BFTT), Virtual Flag, USAF Distributed Mission Operations Center (DMOC)**

NASMP Implementation

- Evolved to two Integrated Paths forward
  - Strike Federation
    - F/A-18C/E/F
    - E-2C
    - EA-6B
    - EP-3E
    - E-6
    - E/A-18G
    - JSF
  - Maritime Federation
    - P-3C
    - SH-60B/F/R
    - H-60H
    - MH-60S
    - MMA

FAST / NASMP Challenges / Accomplishments

- **Poorly Defined Requirements**
  - Leadership push rather than user pull
  - Integrated Readiness Capability Assessment (IRCA) Taking Savings Ahead of Delivery
  - T&R Focus Does Not Address Composite or Joint Events
- **Inherent Interoperability**
  - Open Architecture
  - Database Reuse
  - Integration with Multiple SAFs
- **Reduce Life Cycle Cost**
  - PC Processors
  - Upgradeable and Scalable Architecture
- **Coordinate with Battle Group and Joint Forces Upfront**
  - Marine Corps Aviation Simulation Master Plan (MCASMP) Lessons Learned
  - FFC Liaison
  - Virtual At Sea Training (VAST) and Partnership with Navy Research Laboratory (NRL)
  - Collaborative Development with Air Force
  - Coordinated Architecture with BFTT

FAST Strike Package Plan

Platform	Simulation Efforts	RFT Dates
F/A-18C	DMT/TOFT	2004/5/7
F/A-18E/F	WTT/TOFT	2004/5/6/9
E-2C	HE2K WSTs	2005/6
EA-6B	TOFT/Upgrades	2004/7
EP-3E	MAST Upgrades	2006
ALL	Networking	2005-2008

Strike Package Plan

Est RFT	System	Location	COST
June 04	F/A-18C DMT	Oceana	41.9
Feb 05	F/A-18C DMT	Lemoore	17.3
2003	F/A-18E/F 3 ea TOFTs (5 panel)	Lemoore (xfr one to Atsugi in 05)	
2004	F/A-18E/F WTT	Lemoore	
2008	F/A-18E/F WTT	Lemoore	
2004	F/A-18E/F 2 ea TOFT (7 panel)	Oceana	
2006	F/A-18E/F WTT	Oceana	
2009	F/A-18E/F WTT	Oceana	
2005	F/A-18E/F TOFT (5 panel)	Atsugi (xfr #113 from Lemoore)	
Aug 04	EA-6B ICAP II/III OFT 2F187F	Whidbey	
Aug 04	EA-6B ICAP II/III Tactics 2F187T	Whidbey	
2003	E-2C WST (HE2K Minus)	Norfolk	
2006	E-2C WST (full HE2K Mod)	Norfolk	
2005	E-2C WST (full HE2K)	Pt Mugu	
2006	EP-3 MAST Upgrade	All	5.0
2006	Networking	CONUS VFA/VAW/VAQ/VQ	30.0
2007	F18 TOFT 9 panel upgrade	Lemoore, Oceana, Atsugi	9.0

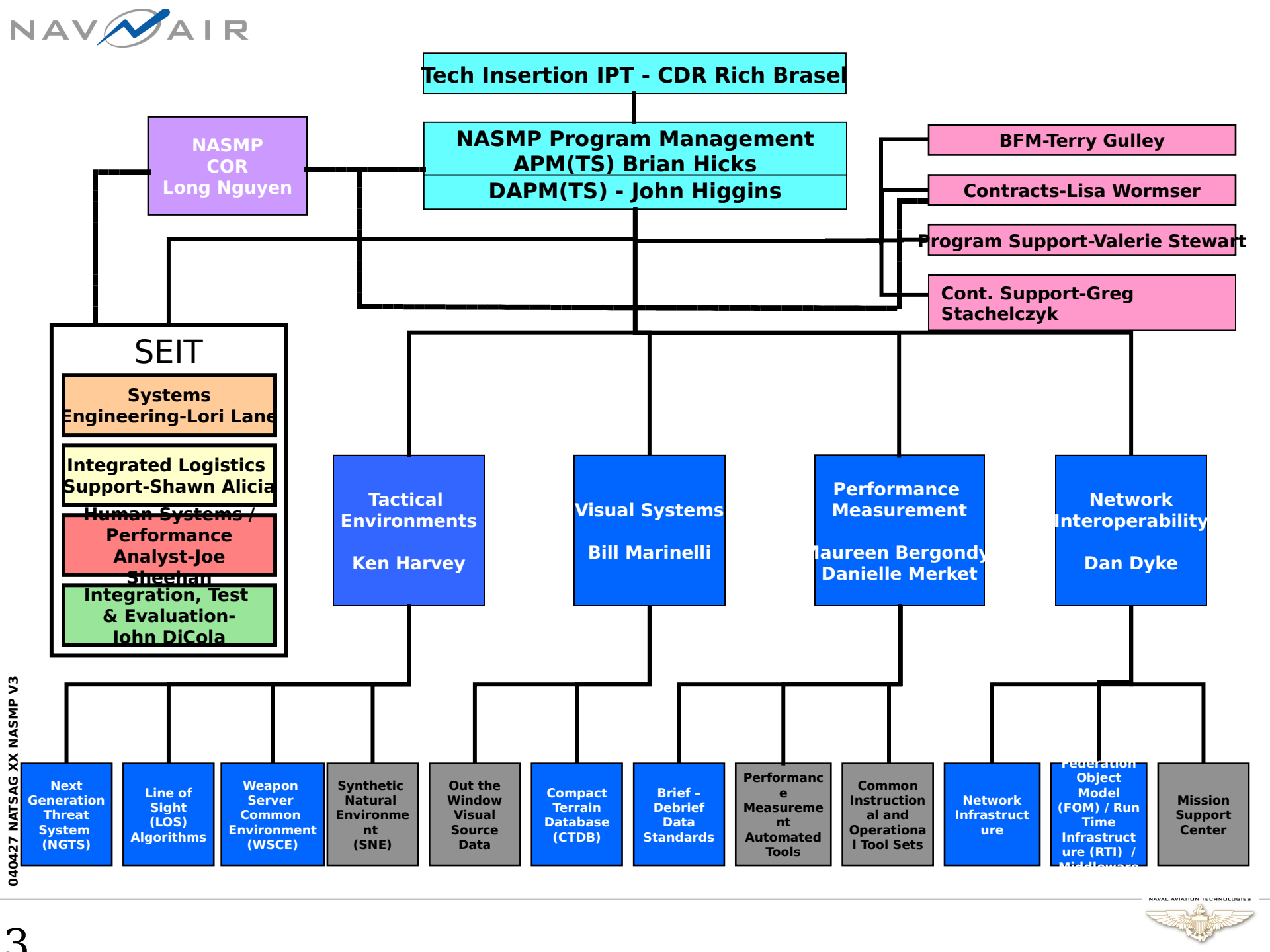
FAST Maritime Package Plan

Platform	Simulation Efforts	RFT Dates
P-3C	TACT/AIP	2004/7/8
P-3C	Level D Sims	2007/8
SH-60B/F/R	TOFT /Upgrades	2007/8
H-60H	Upgrades/AVET	2007/8
MH-60S	Upgrades	2008/9
ALL	Networking	2006-2009

Maritime Package Plan

Est RFT	System	Location	Cost
Apr 04	P-3 TACT	KBay	
2007	P-3 Level D Sim	Various	25.0
2007	P-3 TACT	Jax (2nd Jax unit)	9.4
2007/08	P-3 TACT AIP upgrades	Brunswick, Whidbey, Kbay, Jax	24.8
2007	Networking	CONUS VP/HSL/HS/HC	1.3
2008	SH-60B/R TOFT	KBay	20.0
2007	H-60F/H WST visual upgrade	North Island	16.9
2007	SH-60B/F/H database improvements	North Island & Jax	14.0
2008/9	MH-60S Visual Upg & database improv	Norfolk, North Island	8.0

Blue indicates APN-7 (FAST)
Red indicates APN-1 (Platform PMA)
Purple indicates APN-5 (Platform PMA)


NAVAIR
Tech Insertion IPT - CDR Rich Brasel
NASMP COR Long Nguyen
NASMP Program Management
APM(TS) Brian Hicks
DAPM(TS) - John Higgins
BFM-Terry Gulley
Contracts-Lisa Wormser
Program Support-Valerie Stewart
Cont. Support-Greg Stachelczyk
SEIT
Systems Engineering-Lori Lane
Integrated Logistics Support-Shawn Alicia
Human Systems / Performance Analyst-Joe Sheehan
Integration, Test & Evaluation-John DiCola
Tactical Environments
Ken Harvey
Visual Systems
Bill Marinelli
Performance Measurement
Maureen Bergondy
Danielle Merket
Network Interoperability
Dan Dyke
Next Generation Threat System (NGTS)
Line of Sight (LOS) Algorithms
Weapon Server Common Environment (WSCE)
Synthetic Natural Environment (SNE)
Out the Window Visual Source Data
Compact Terrain Database (CTDB)
Brief - Debrief Data Standards
Performance Measurement Automated Tools
Common Instructional and Operational Tool Sets
Network Infrastructure
Federation Object Model (FOM) / Run Time Infrastructure (RTI) / Middleware
Mission Support Center
040427 NATSAG XX NASMP V3
NAVAL AVIATION TECHNOLOGIES

Program & Product Management

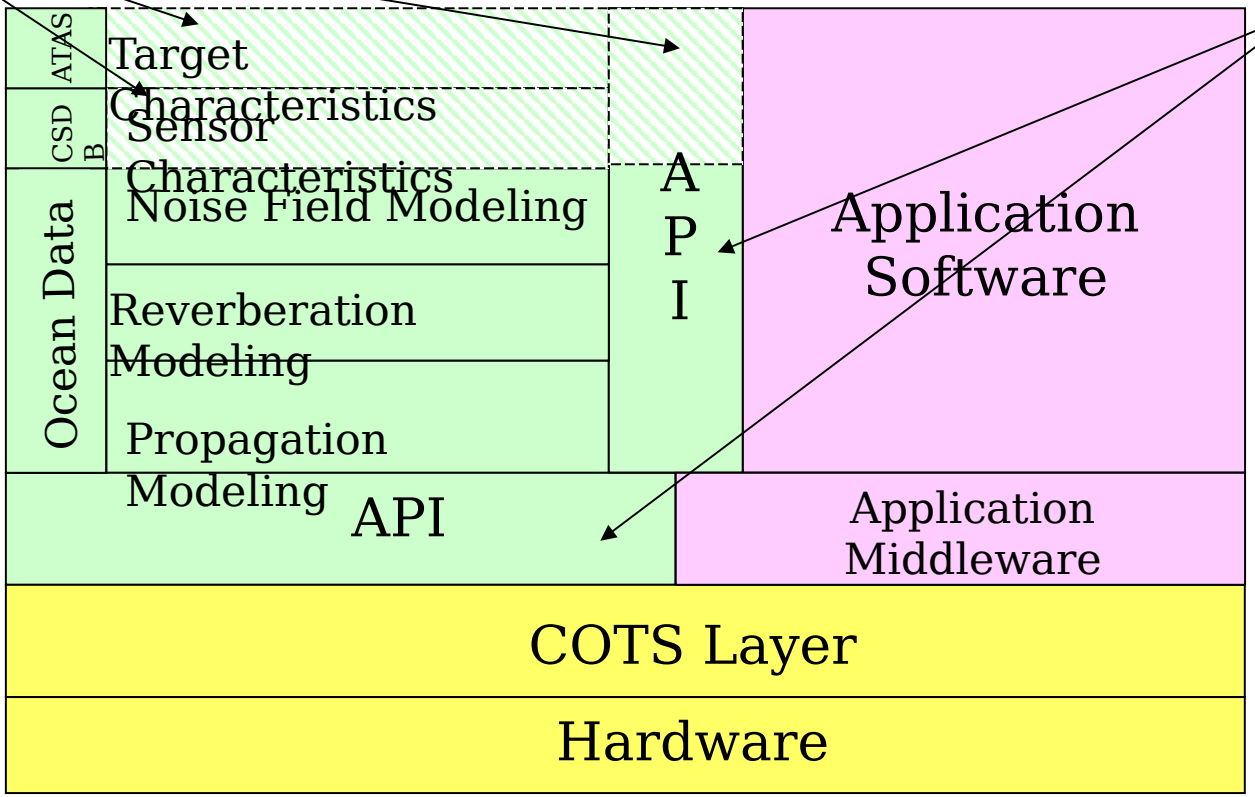
- Reorganized – Product Oriented
- Labor is budgeted by Work Breakdown Structure (WBS)
- Significantly reduced Engineering Research, Development, and Integration effort from 47 workyears in FY03 to 12 in FY04
- Monthly Product Status Report (PSR) and software Correction Request (CRs) from Air Combat Environment Test and Evaluation Facility (ACETEF) – On NGTS and WSCE products.
- Establish industry standard for Configuration Management (CM) of products – ClearCase.

PRODUCTS
Strike Federation

- NGTS – Next Generation Threat System - Development build delivered to L3 (NASMP Integration Contractor) 27 February 2004. Final development build will deliver 23 August 2004 with all CR 1s and 2s corrected.
- WSCE – Weapons Server Common Environment - Development build delivered to L3 (NASMP Integration Contractor) 27 February 2004. Final development build will deliver 23 August 2004 with three weapons models. Final production build will have a full suite of F/A-18C weapons
- FOM – Federation Object Model - Combines F/A-18 Basic Object Model (BOM) and Navy Training Meta FOM (NTMF) for High Level Architecture (HLA) communication. Initial delivery to L3 27 February with periodic updates through July 2005.
- FAD – Federation Agreement Document ("Network Spec") – describes how communication is handled over the HLA network.
- RTI – Run Time Infrastructure - VTC Commercial Product
- Networks – GFE – KG-75 encryptors and support
- Line of Sight (LOS) Algorithms – Delivered and integrated onto DMT suite #1 to be delivered to NAS Oceana summer 2004

PRODUCTS
Maritime Federation

NASMP Tools (to be developed)



NASMP Role in Maintaining & Updating Databases?

NASMP Adoption of Application Program Interfaces (API)

- Through selection of a standard interface (API), applications develop to one side of the interface, NASMP resource models develop to the other side. Replacing environmental models becomes less expensive for future improvements in capability. Models become more portable.

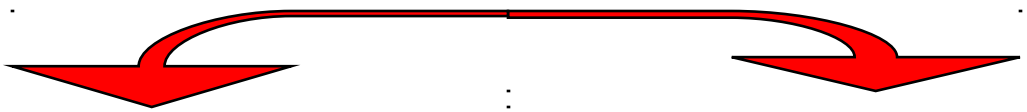
- Weapon Server – incorporate Hellfire and MK-46 Torpedo

NASMP Products

			GOVERNMENT FURNISHED INFORMATION (GFI)			
CONTROL#	**VERSION**	**DATE**	**NOMENCLATURE**	**NASMP CONTRACT#**	**CONTRACT DELIVERY**	**EST FLEET DELIVERY**
NASMP-1014-001	Version 1.0	28-Jan-04	Federation Agreement Document (FAD)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP P-2001-001	Preliminary	12-Dec-03	Training System Support Document (TSSD)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2002-001	Version 1.1	27-Jan-04	System Requirements Document (SRD)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2003-001	Version 1.1	27-Jan-04	Software Design Document (SDD)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2017-001	Version 2.0	27-Jan-04	Acceptance Test Report (ATR)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2018-001	Version 1.0	27-Jan-04	System Test Procedures (STPROC)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2019-001	Version 1.1	27-Jan-04	Tactical Environment System Test Plan (STPLAN)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2025-001	Version 1.1	27-Jan-04	Interface Design Document (IDD)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2043-001	Version 0.1	20-Nov-03	Software Design Document (SDD)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2045-001	Version 2.0	27-Jan-04	Interface Design Document (IDD)	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
NASMP-2059-001	Version 1.0	17-Nov-03	Weapon Server Common Environment (WSCE) User's Manual	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
	Version 1.0	28-Jan-04	NASMP Federation Object Model (FOM) Final	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
	VO 3.5	17-Feb-04	Unclassified WSCE Source Code	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
			CLASSIFIED MATERIAL			
	VOL 3.5	27-Jan-04	TE Source Code	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
	VOL 3.5	27-Jan-04	WSCE Source Code	N61339-00-D-0032-0003/11	27-Feb-04	30-Jul-05
			F-18 DMT Weapons Flyout Models Derived from			
			N61339-00-D-0034 Declassify on X3 DCN S:0795-1			

FRP Simulation

- **FRP Poses Deployable Simulation Challenges**
  - Requirements Crossroads – Where do we go?



Opt 1 – High Fidelity – Full or Substantial T&R Credit – High Cost/ Support Reqts – JSF-like	**Opt 2** – Low Fidelity – Limited or No T&R Credit – “Disposable”/No Support Reqts – PTT/ Perishable Skills Trainer

Evolutionary Training Paradigm